REMARKS

Reconsideration and allowance of the above-referenced application are respectfully requested.

I. STATUS OF THE CLAIMS

None of the claims are amended herein.

Claims 5-8, 14-17, and 22-26 are allowed, and claims 4, 12, 13, and 21 are "objected to."

In view of the above, it is respectfully submitted that claims 1-26 are currently pending and under consideration.

II. REJECTION OF CLAIMS 1, 9, AND 18 UNDER 35 U.S.C. §102(B) AS BEING ANTICIPATED BY IBM TDB Vol. 39, No. 11, pp. 181-182 ("IBM")

The present invention as recited in claim 1, relates to a method of controlling a disc drive using a counter-electromotive force, the method comprising "performing an operation of the value of the counter-electromotive force using the voice coil voltage."

IBM TDB teaches a quiescent active retract system for a disk file. IBM TDB uses a sensor system to continuously monitor shock levels during power-off times to activate a retract circuit immediately upon sensing a shock. IBM TDB uses a shock sensor so that shocks can be detected by monitoring a VCM voltage.

IBM TDB is completely silent with regard to a method of controlling a disc drive using a counter-electromotive force and performing an operation of the value of the counter-electromotive force using a voice coil voltage as recited in claim 1 of the present invention. More importantly, IBM teaches the use of a shock sensor to detect shocks, which is different from the present invention. The present invention does not use a sensor to sense disturbance in a disc drive. The present invention also does not use a sensor to perform an operation of the value of the counter-electromotive force. Accordingly, it is submitted that IBM TDB does not teach or suggest the features recited in claim 1.

Similar to claim 1, claim 9 recites, "performing an operation of a value of a counter-electromotive force using a voltage detected from the voice coil," and claim 18 recites, "performing an operation of the value of the counter-electromotive force using the voice coil voltage." Therefore, it is submitted that IBM TDB also does not teach or suggest the features recited in claims 9 and 18 of the present invention.

In view of the above, it is respectfully submitted that the rejection is overcome.

III. REJECTION OF CLAIMS 1-3, 9-11, AND 18-20 UNDER 35 U.S.C. §103(A) AS BEING UNPATENTABLE OVER UCHIIKE ET AL. (6,236,527) IN VIEW OF PATTON ET AL. (5,654,840)

Claim 1 recites, "[a] method of controlling a disc drive using a counter-electromotive force, the method comprising: detecting a voltage applied to a voice coil during a predetermined mode; performing an operation of the value of the counter-electromotive force using the voice coil voltage; comparing the value of the counter-electromotive force operated with a predetermined threshold; and when the value of the counter-electromotive force is equal to or larger than the predetermined threshold, controlling a voice coil motor and a spindle motor so that a current mode is stopped and a parking or unloading mode is executed." Thus, for example, the present invention teaches a method for calculating a counter-electromotive force, determining whether a shock exceeds a critical shock amount using the calculated counter-electromotive force, and performing, stop, parking, or unloading modes of a disk drive when the shock is determined to exceed the critical shock amount, without using an additional sensor for detecting a shock.

Uchiike teaches a disk drive with means to prevent accidental landing of a head/slider on the disk surface. In Uchiike, a shock amount in a loading process is detected using a sensor for detecting a shock. When the detected shock amount exceeds a critical value, an unloading mode is carried out. Accordingly, the shock amount is detected only in the loading process.

Patton teaches a hard disk drive which uses the back electromotive force (BEMF) of the actuator to detect shocks. In Patton, a counter-electromotive force is calculated in a track following mode from a voltage detected from a voice coil without using an additional sensor for detecting a shock. When the calculated counter-electromotive force exceeds a critical value, data write and data read processes are inhibited.

However, in the present invention, the shock amount is detected without using a shock detection sensor not only in the loading mode but also in a seek mode, a follow mode, a read mode, and a write mode. When the detected shock amount exceeds the critical value, the parking or unloading mode is carried out. The above-described of the present invention is not taught by Patton or Uchiike.

Further, Patton teaches that the control process is performed in the track following process, while Uchiike teaches that the control process is performed in the loading process. Thus, it is submitted that the combination of Patton and Uchiike would not produce the results of the present invention. Accordingly, Patton and Uchiike, either alone or in combination, do not teach the features recited in claims 1-3, 9-11, and 18-20.

In view of the above, it is respectfully submitted that the rejection is overcome.

IV. CONCLUSION

In view of the foregoing amendments and remarks, it is respectfully submitted that each of the claims patentably distinguishes over the prior art, and therefore defines allowable subject matter. A prompt and favorable reconsideration of the rejection along with an indication of allowability of all pending claims are therefore respectfully requested.

If there are any additional fees associated with filing of this Amendment, please charge the same to our Deposit Account No. 19-3935.

Respectfully submitted,

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